

Remarks

Applicants appreciate the Examiner's indication that claims 2, 9, and 18 are directed to allowable subject matter. Additionally, in the Office Action, the Examiner objected to the disclosure; rejected claims 1 and 3-7 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,553,029 to Alexander ("Alexander") in view of U.S. Patent No. 6,453,358 to Michels et al. ("Michels"); and rejected claims 8, 10-17, and 19-20 under 35 U.S.C. § 103(a) as being unpatentable over Alexander in view of U.S. Patent No. 6,810,037 to Kalapathy et al. ("Kalapathy").

As a preliminary matter, Applicants note that Information Disclosure Statements (IDSs) were filed on September 21, 2001 and November 19, 2004. Neither of the PTO 1449 forms that accompanied these IDSs were returned with the present Office Action. According to the PTO PAIR system, both of these IDSs were received and entered in the file. Applicants request that the Examiner appropriately consider and initial the PTO 1449 forms, and return an initialed copy of the forms with the next communication from the patent office.

By this Amendment, Applicants have amended the specification to supply the serial number and filing date of the application mentioned in paragraph [0005], amended paragraphs [0018] and [0019] to correct a formatting error, and amended paragraph [0082] to correct a typographical error. In view of the amendment to paragraph [0005], the objection to the specification is obviated.

Additionally, Applicants have amended claims 1, 6, 8, 9, and 18. Claim 1 has been amended to substantially incorporate the features of claim 2. Claims 6,

8, 9, and 18 have been amended to improve form. Claim 2 has been canceled without prejudice or disclaimer. Reconsideration of the outstanding rejection of pending claims 1 and 3-20 is respectfully requested in view of the amendments above and the following remarks.

Claim 1, as amended, substantially includes the features previously recited in claim 2. Because claim 2 was indicated as being directed to allowable subject matter, Applicants submit that the rejection of claim 1 under 35 U.S.C. § 103(a) is obviated. The rejections of claims 3-7 are also obviated, at least by virtue of their dependency from claim 1.

Claims 8, 10-17, and 19-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Alexander in view of Kalapathy. For the following reasons, Applicants respectfully traverse this rejection.

Regarding independent claim 16, the Examiner concedes that Alexander does not disclose each of the features recited in this claim. In particular, the Examiner notes that "Alexander does not expressly disclose the plurality of address sub-tables." (Office Action, page 7). The Examiner, however, relies on Kalapathy to disclose these features of claim 1. (Office Action, page 7). Applicants respectfully disagree with the Examiner's rationale in making the rejection of claim 16.

Claim 16 is directed to a multiport switch that includes a plurality of receive ports, a plurality of transmit ports, and first and second address tables, each of the first and second address tables including a plurality of addressable table entries, each addressable table entry storing frame forwarding information for one of the received frames. Claim 16 also recites a logic device configured to

calculate a first row address of the first and second address tables that the frame forwarding information is to be stored at, determine whether the frame forwarding information is to be stored in the first or the second address table based on a pre-selected bit in the received frame, and store the frame forwarding information in the determined first or second table in the first available entry at the first row address as a table entry.

As noted by the Examiner, Alexander does not disclose the first and second address tables of claim 1. Given that Alexander does not disclose the first and second address tables, Alexander could not possibly disclose the logic device recited in claim 1, which is “configured to calculate a first row address of the first and second address tables that the frame forwarding information is to be stored at, determine whether the frame forwarding information is to be stored in the first or the second address table based on a pre-selected bit in the received frame, and store the frame forwarding information in the determined first or second table in the first available entry at the first row address as a table entry.” (emphasis added).

Applicants submit that Kalapathy does not cure the above noted deficiencies of Alexander. Kalapathy, as noted by the Examiner (Office Action, pg. 7), discloses:

A method for searching a table in a network switch includes the steps of dividing a primary lookup table into a first sub table and a second sub-table, searching the first sub-table with a first search engine, and simultaneously searching the second sub-table with a second search engine. A method for searching a primary address table within a network switch uses the steps of dividing the primary address table into a first and second address sub-tables, storing even numbered memory address locations from the primary address table within the first address sub-table in sorted order, and storing odd numbered memory address locations from the primary

address table within the second address sub-table in sorted order.

(Kalapathy, Abstract). In this section, Kalapathy discloses the creation of a first sub-table and a second sub-table based on dividing a primary address table. In creating the first and second sub-tables, however, Kalapathy explicitly discloses creating the sub-tables by “storing even numbered memory address locations from the primary address table within the first address sub-table in sorted order, and storing odd numbered memory address locations from the primary address table within the second address sub-table in sorted order.” (Kalapathy, Abstract). In stark contrast, the logic device of claim 16 “determines whether the frame forwarding information is to be stored in the first or the second address table based on a pre-selected bit in the received frame.” Kalapathy explicitly discloses dividing the primary address table based on even or odd memory locations of the primary address table. Accordingly, the sub-tables of Kalapathy cannot be said to be created “based on a pre-selected bit in the received frame,” as is recited in claim 16.

In rejecting claim 16, the Examiner additionally points to Fig. 13 of Kalapathy and column 57, lines 25 plus of Kalapathy. (Office Action, pages 7 and 8). These sections of Kalapathy appear to generally relate to, among other things, class of service (COS) and quality of service (QOS) features provided by Kalapathy. Applicants submit, however, that these sections of Kalapathy are not particularly relevant to the features recited in claims 16, 17, 19, or 20. If the Examiner continues to maintain that these sections of Kalapathy are relevant to claim 16 or its dependent claims, Applicants request that the Examiner specifically identify which claims or which portions of the claims are relevant to

which sections of Kalapathy.

For at least these reasons, Applicants submit that neither Alexander nor Kalapathy disclose or suggest the switch of claim 16. Accordingly, Alexander and Kalapathy, either alone or in combination, do not disclose or suggest each of the elements of claim 16 and the rejection of this claim should be withdrawn. The rejection of dependent claims 17, 19, and 20 based on Alexander and Kalapathy should also be withdrawn, at least by virtue of the dependency of these claims from claim 16.

Independent claim 8, and its dependent claims 10-15, also stand rejected based on Alexander and Kalapathy.

Claim 8, as amended, is directed to a method of using a lookup table implemented with a first lookup sub-table and a second lookup sub-table. The method includes calculating a row address of the lookup table based on a hash value of a network address associated with an entry in the lookup table; storing the entry in one of the first sub-table and the second sub-table at the calculated row address by writing the entry to the one of the first sub-table or the second sub-table based on a pre-selected bit in the network address; and accessing the entries stored in the lookup table by reading entries stored at a desired address in the first and second sub-tables.

Applicants submit that Alexander and Kalapathy, either alone or in combination, do not disclose or suggest each of the features recited in claim 8. Claim 8 recites, for example, storing an entry in one of the first sub-table and the second sub-table by writing the entry to the one of the first sub-table or the second sub-table based on a pre-selected bit in the network address. As

discussed above with regard to claim 16, Alexander and Kalapathy do not disclose or suggest any such feature. More specifically, Alexander does not disclose first and second tables, much less the first and second sub-tables recited in claim 8. Kalapathy discloses sub-tables, but does not write entries to one of the first or second sub-tables based on a pre-selected bit in the network address. Instead, Kalapathy discloses dividing the primary address table based on even or odd memory locations of a primary address table, but not on a pre-selected bit in the network address.

For at least these reasons, Applicants submit that claim 8 is not disclosed or suggested by the prior art of record. The rejections of claims 10-15, at least by virtue of their dependency from claim 8, are also improper and should be withdrawn. Claims 10-15 recite additional features that are not disclosed or suggested by Alexander or Kalapathy.

Claim 13, for instance, further defines the method of claim 8 and recites concatenating the network address with a virtual local area network index to obtain a concatenated value and generating the hash value using a hashing function based on the concatenated value. Applicants submit that neither Alexander nor Kalapathy disclose or suggest this feature of claim 13. Further, the Examiner has not specially addressed this claim in the Office Action. If the Examiner continues the rejection of this claim, Applicants request that the Examiner specifically address this claim in any future correspondence.


Claims 10-12, 14, and 15 also recite features that are not explicitly addressed in the Office Action. Applicants request that the Examiner specifically address the features of these claims in any future correspondence.

In view of the foregoing amendments and remarks, Applicants respectfully request withdrawal of the outstanding rejections and the timely allowance of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

HARRITY & SNYDER, L.L.P.

By: 
Brian Ledell
Reg. No. 42,784

Date: June 17, 2005
11240 Waples Mill Road
Suite 300
Fairfax, VA 22030
Telephone: (571) 432-0800
Facsimile: (571) 432-0808